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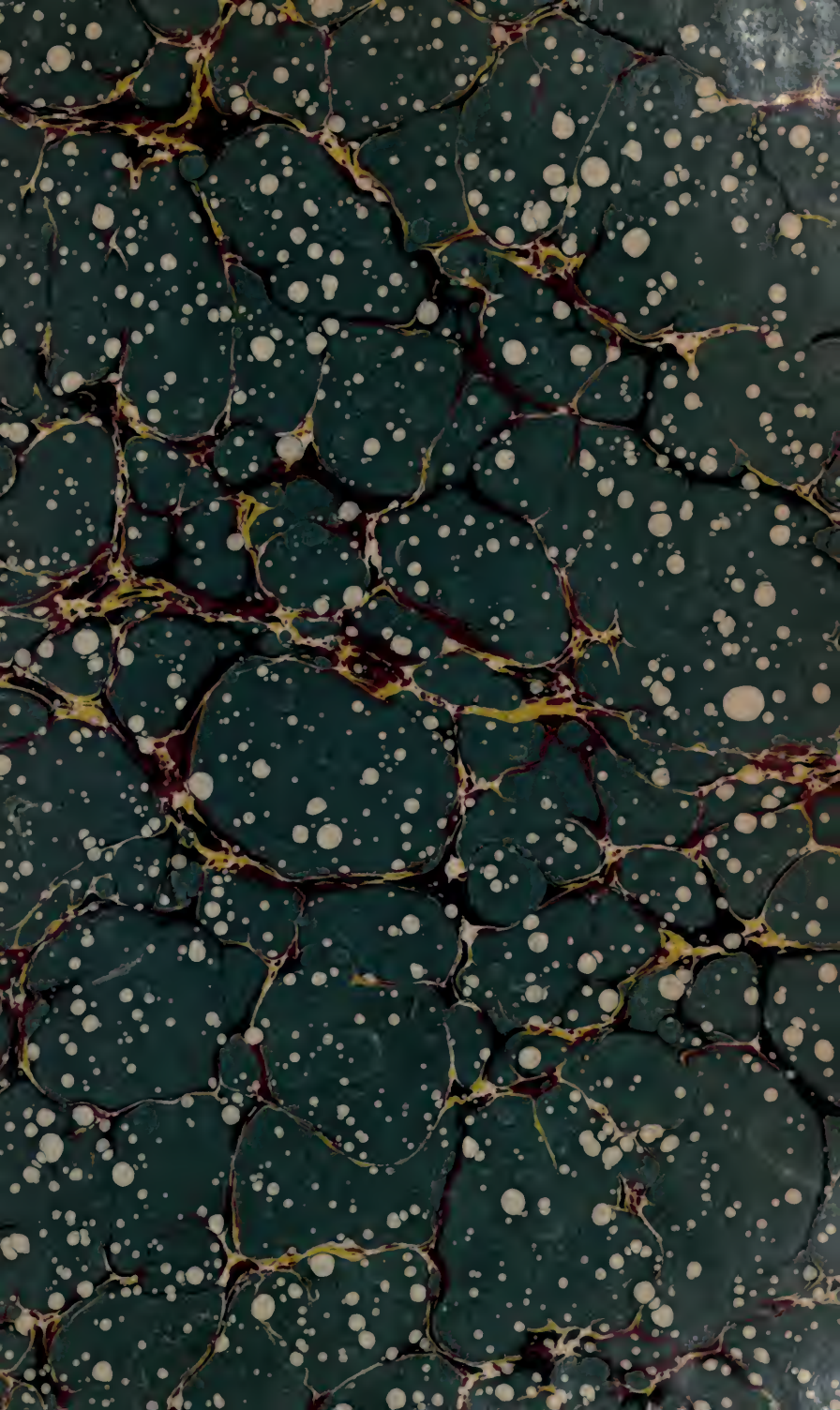
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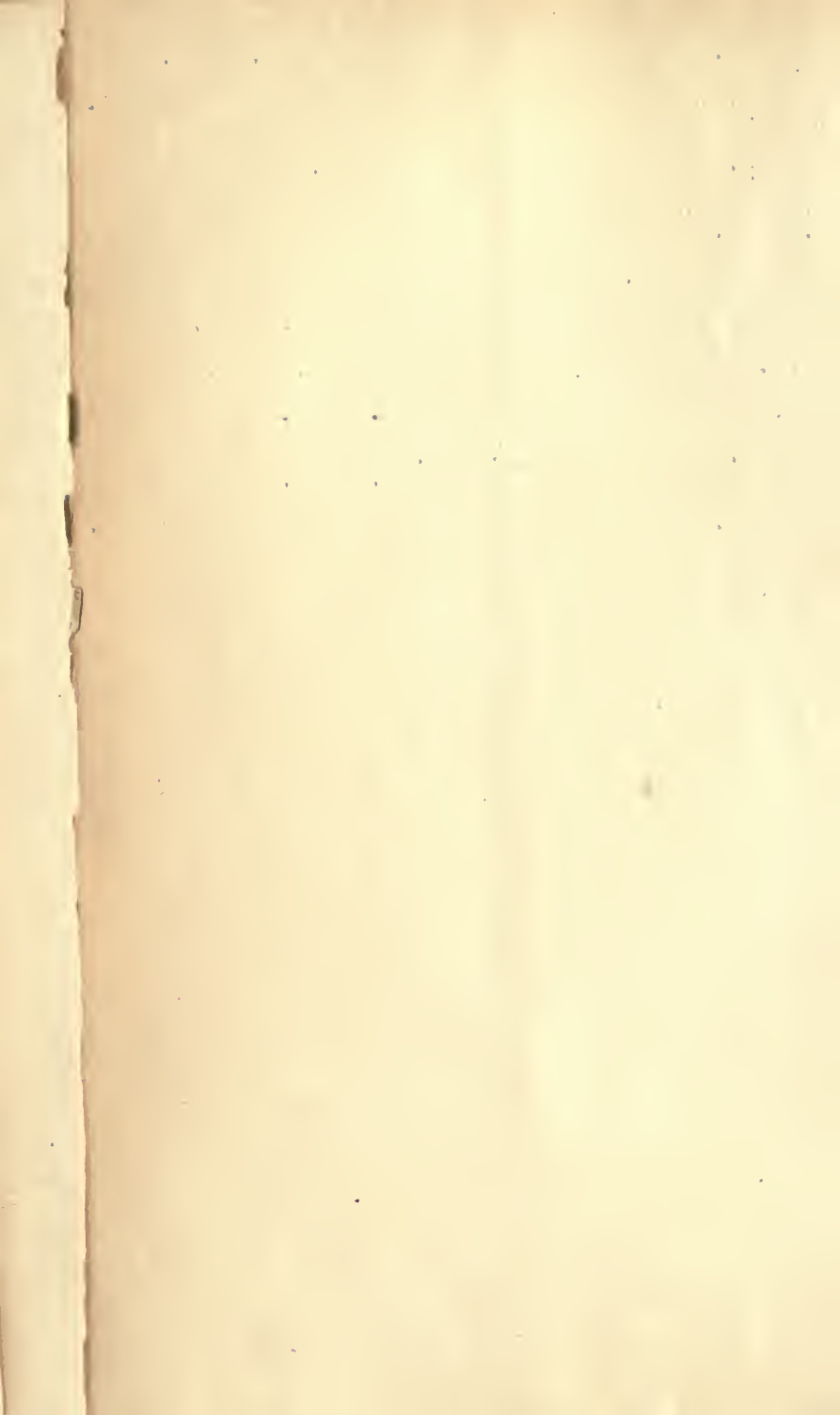
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INSURANCE
LIFE AND ACCIDENT

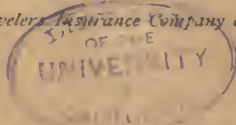
A Paper

READ BEFORE THE WORLD'S CONGRESS AUXILIARY OF
THE WORLD'S COLUMBIAN EXPOSITION
AT CHICAGO

BY

JAMES G. BATTERSON

President of the Travelers Insurance Company of Hartford, Conn.



JUNE 25, 1893



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HARTFORD, CONN.

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INSURANCE: LIFE AND ACCIDENT

THE main object of the World's Fair is to induce representative men, in all occupations, trades, and professions, to come together and prove their right to existence, by the production and exhibition of their best work with the most approved and economical means.

If there is any antiquated inhabitant of the back country who is still carrying his grist to mill, with a stone in one end of the bag and his corn in the other, he has only to come here to find out a better way, and possibly to learn that he can buy his bread in town cheaper than he can get his grist from the country mill.

In dealing with the question of insurance, I shall not trespass upon the camp of the actuaries; but, in a general and popular way, state such principles as every policy-holder should know, if he would understand the nature of his contract.

In its broad sense, the manifest purpose of an insurance company is to lift the burden of a great calamity from a single family or individual which has received the blow, and distribute its force upon society at large,—or, more strictly speaking, upon the members of an association organized for that specific purpose.

A loss, therefore, which would bring irreparable ruin and distress upon a single family, if distributed to a sufficiently large number of members, would afford prompt relief, without imposing any hardship upon other members of the association.

This principle, which originally took form in guilds, confraternities, religious orders, burial societies, and lodges, is of great antiquity, and is known to have been practiced about three hundred years before Christ.

The expansion of the principle into practical business shape was prompted by the great London fire of 1666, following which, clubs, individuals, and societies received proposals for underwriting against loss or damage by fire; but the first regular office was not opened for business until 1681.

The entire history of Insurance, then, will be found within the records of the past two hundred years.

THE AMICABLE SOCIETY,

which was organized 24th January, 1705, has been generally credited with having been the *first* to transact the business of Life Insurance, but it was of the nature of a Friendly Society rather than an Insurance Company. The membership could not exceed 2,000. The contribution from each member was £6 4s., with five shillings additional for the registrar, and five shillings for the stock. No member was admitted under 12 years of age, nor over 45, and *all paid alike*.

When the membership was full, if 100 members died during the year, then 100 was distributed to claimants for each of the deceased members, equal to an assessment of £5 each on all of the members. The Corporation was not authorized to grant insurances, at rates of premium determined by age, until 30th October, 1807, and it was not authorized to insure the payment of a fixed sum until 8th May, 1845.

In 1866 the business of the Amicable was absorbed by the Norwich Union Life, and the Amicable Company retired, after an existence of 161 years, without ever having had any proper table of premiums or mortuary dividends based upon age at time of entry.

The Equitable Society was undoubtedly the first to

put the business of life insurance upon a scientific basis, by means of tables, which were supposed to determine the rate of mortality for all ages.

THE NORTHAMPTON TABLE

was constructed by Dr. Price, from observations on the lives of 4,689 persons in All Saints parish, Northampton, during the 46 years from 1735 to 1780. These observations showed the mean duration of life to be only 25.18 years, whereas by later and more accurate observations it was found to be 37.57 years, disclosing an error of more than 32 per cent. against the insurant.

The old Equitable office adopted these tables for assurances, and the British Government adopted the same for annuities; the consequence was, that the Equitable received about 35 per cent. more than the assurances were worth, and the Government received a proportionate amount less than the annuities were worth. The Equitable office was getting rich, while the Government was being loaded with an increasing debt.

In due time Mr. Morgan, the accomplished Actuary of the Equitable, discovered that the mortality of the office was about one-third less than that indicated by the tables of Dr. Price. Mr. Finlaison, on the other hand, discovered that the longevity of the annuitants, who were billeted on the public treasury, was about one-third greater than that shown by the tables,—which he demonstrated was a great loss to the treasury.

Investigation disclosed a serious error in the first factor of Dr. Price's observations. By taking the record of the christenings in All Saints parish, the Doctor overlooked the fact that about one-third of the population in that parish were Baptists, who, not having the fear of a *limbus infantum* before their eyes, did not baptize their children. This increased the apparent ratio of mortality to christenings, and played havoc with the tables, as well as the public treasury.

It is quite likely that, when Doctor Price witnessed the destruction of his great work, he was well prepared to justify the Puritans for driving the dissenting Baptists out of Massachusetts on account of their baptismal heresies.

The error was so expensive to the Government that Parliament repealed the Annuity Act, and John Bull temporarily quit the business.

Then came the Carlisle Tables, based on the observed mortality of the parishes of Saint Mary and Saint Cuthbert, Carlisle, by Doctor Heysham, M.D., for 8 years, 1779 to 1787. These data were used by Joshua Milne in the construction of the Carlisle Tables. When Mr. Milne's work was compared with that of Dr. Price on the Northampton Tables, the following differences appeared: Milne demonstrated that of 1,000 births, at the end of 20 years 609 would be living. Dr. Price's observations showed that only 441 would be living, making an average difference at all ages of 33 per cent.; which proved that there were no Baptists in Carlisle to disturb his calculations, or he had counted them with all other saints in the parishes patronized by Saints Mary and Cuthbert.

The Carlisle Tables superseded Northampton, and came into general use; nevertheless they were freely criticised by the actuaries, owing to irregularities at various ages.

The first mortality observation of a public character applicable to England and Wales was made by Rickman, and applied to the census of 1831. An important error, however, was subsequently discovered in the failure of the parish registers to account for the burials of Dissenters, and the value of the error was fixed at from 8 to 10 per cent.

Next in order was English Life Table No. 1, based upon the census of 1841 and published in 1843; English

Life Table No. 2, based on corrected and extended data of the census of 1841, and published in 1863; English Life Table No. 3, taking the census of 1841, combined with the census of 1851, embracing over 50,000,000 persons living and 6,490,720 deaths, over a period of 17 years. The tables, however, were challenged as being inaccurate and defective on many essential points involved in the problems of insurance. The Experience Table No. 1, 1838, and Experience Table No. 2, 1863, known as the Actuaries' Table, immediately forced their way to general use, as they were known to correct palpable errors both as to Northampton, Carlisle, and other Tables, and are still believed to fix the law of human mortality as to all ages within a small fraction of error.

The American Experience Table, 1868, based upon lives rather than policies, is the work of Sheppard Homans, and was for many years the standard of valuation for New York and other States, while the English Actuaries' Table is still the law for Massachusetts, and is now for New York.

Thus have the observations and experience of the past century been gathered up, in order to find the law which governs the mean duration of human life.

The contingencies of uncertainty, to which the life of every individual living is constantly exposed, are proverbial; and it is the knowledge of these contingencies which should cause every valuable life to seek the only protection which is available.

The law, then, which draws the line of certainty within very narrow limits, when the last of, say, 100,000 lives will surely fail, is not enough. We must know the law which fixes the mean mortality for every year between the ages of one and one hundred inclusive, and the probability that any given life will survive one or any given number of years, as also the converse of

the probability, that any given life will fail within one or any given number of years.

The necessity of accurate tables is thus demonstrated; *e. g.*, A. B. at age 20 has a life contingency valued at \$10,000, but dependent on his surviving 20 years, or reaching the age of 40. What is it worth to take the risk of his dying before twenty years, and having in that event to pay \$10,000, but if he survives 20 years to pay nothing.

By the Actuaries' Table, out of 100,000 lives, the number living at age 20 is 93,268, and the number dying during the next 20 years is 14,615. The probability of A. B.'s dying within 20 years is therefore determined by the fraction of which 14,615 is the numerator and 93,268 the denominator; consequently $\frac{14615}{93268}$ of \$10,000 = \$1,567, the theoretical value of the risk, without considering the element of interest.

The net annual premium for an insurance of \$10,000 against death within 20 years, at age 20, would be \$79.40; the sum of these payments in 20 years, discounted by the actuaries 4 per cent. tables, equals \$1,052.57, and is the net single premium to be paid immediately as the present monetary value of the risk.

By the American Experience Table it would be \$1,063.30

" Carlisle Table	"	"	"	1,101 20
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" Northampton Table	"	"	"	1,541.50
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Thus it will be seen that the difference between the present value of this single premium, for a 20-year term, is 48.5 per cent. greater by Northampton than by the actuaries, and illustrates Dr. Price's fundamental error, in not counting the children of the Northampton Baptists.

Reversing the proposition, our next inquiry is, what is it worth to insure \$10,000 to A. B., the same to be paid absolutely at the end of 20 years, or at death, if sooner occurring.

The number living at 20 is 93,268.

The number living at 40 is 78,653.

The probability of his living 20 years is found by the fraction of which 78,653 is the numerator, and 93,268 is the denominator; thus, ~~78653~~ of \$10,000 = \$8,433—the theoretical value of the risk, without the element of interest. The net annual premium for an endowment of \$10,000, at the end of 20 years, by the Actuaries Table, is \$369.70; the sum of all the annual premiums for 20 years, discounted at 4 per cent., gives us the net single premium of \$3,848.73 as the present monetary value of the risk,—payment immediate.

By American Experience Table it is \$3,848.00

By Carlisle Table " 3,721.43

By Northampton Table only . 3,379.80

Here we find the Northampton Tables, when applied to the probability of living, about fifteen per cent. *below* all the other Tables, on a 20-year endowment;—which illustrates the disastrous effect on annuities at all ages sold by the English Government.

Thus by long continued observation and practical experience has the law of mortality been developed, which governs all forms of life insurance contracts.

It matters not by what ingenuity or device one form of policy may be made to appear better than another; for in due time we shall find the string which ties them one and all to the supreme law which governs all such contracts, and must be obeyed. Nevertheless, the conditions of life, and the needs of insureds are so various, that many forms are needed to meet the numerous exigencies known to the present, and possible to the future.

Life Insurance is an ever present necessity to the great majority of mankind, and yet the percentage of the insured to the uninsured is miserably small. Very many do not insure because they do not understand

the subject; others, because they look upon it as a game of chance, in which they have to die, if they would win. They look at their own chance of winning through one end of the telescope, and at the Company's through the other. Some do not need it for themselves, and are indifferent to the necessities of those who do. There are those also, who have no ambition to be independent of their neighbors, and have no shame that their grave will be digged at the expense of another.

Eighteen dollars per annum, or \$1.50 per month, will provide a man at age 30, with an insurance for \$1,000, payable at death, and \$10.00 per annum will insure the payment of \$500. There can be no good excuse, therefore, for any man in good health who has not at least so much provided for his last sickness and burial.

GAMBLING.

Certain writers have illustrated these propositions from the standpoint of a gambler, who makes a bet with the company on the contingency of his living or dying, as the case may be.

The gambling illustration, I have always contended, is unhappy and inapplicable; for in a fair gambling scheme, the risk should be the same to one party as it is to the other, and what one gains the other loses. In the case before us, both parties, by assembling all the hazards or contingencies of life, bring them as a whole to the equilibrium of certainty, and the certainty is shared by one as well as the other. If the tables are constructed with accuracy, then it is all the same to the company whether it takes the risk of living, or of dying; for in either case the result is certain. The original risk, which attaches to everyone born, is the risk of death, and that risk cannot be avoided any more than the event of itself; but if

the insurance office can minimize the risk, in respect to an assumed monetary value, by subdivision into a hundred thousand parts, and distribution of the same among a hundred thousand lives, its purpose will have been accomplished.

That, however, raises the pertinent question: If one member takes upon himself the minimum of risk, from each of one hundred thousand members, which they in succession have taken from him, why is not the benefit of distribution neutralized? Such would doubtless be the effect, if all the lives were to fail in the same year; but as the decrements in any one year will never exceed 2,362, and if the experiment commences with age 30, it will in the first year hardly exceed 850, out of 100,000 lives exposed, it will be self-evident, that the families of those who fall in the first policy year will derive the largest monetary benefit from the insurance; and so on, year after year, diminishing the benefit of association and distribution, until those surviving in the last years will have witnessed the distribution of all the benefits, and receive less than they have paid.

The law and the result, however, is known at the beginning by all parties. The only uncertainty is as to the particular individuals who will fall first, and receive the largest benefit; but each one of the whole number will be found quite willing that someone other than himself should claim title to the first and the largest benefit.

If it is uncertain at the beginning of this transaction, what the mathematical and financial result will be, then the tables are worthless; and while the parties may be deceived by false data, they are in no sense of the word gamblers. But if, on the other hand, the tables are true, and the financial result can be predicted with certainty at the beginning, then the first

and all the elements of gambling are foreign to the transaction.

The law of gambling is the law of uncertainties, if the game is fair; any element of uncertainty, known to one and not to another, is the same as loaded dice in the hands of a swindler. The law of mortality, on the other hand, is the product of a reasonably exact science, and is available to all. There can be no juggling with the data; and the probabilities of life or death, while uncertain in the abstract, are made as nearly certain in the concrete as human affairs can be.

Life Insurance does not gamble on the uncertainties of a single life; on the contrary, it deals with the certainty which is demonstrated by the mean mortality of an hundred thousand lives.

It deals with monetary values, and the life of one individual, or the death of another, is nothing to the company, except as determining elements of data, and periods of adjustment.

The true gambler, then, is found in the man who does not insure at all. He takes upon himself or his family all the hazards which pertain to a single life, the most uncertain of all uncertainties; and, to save the small annual premium, runs the terrible risk of poverty for his wife and children, in face of the fact, that no sane underwriter would take his single risk for ten times the premium which he thinks he saves.

Taking the risk of a single life, at age 20 for one year, would be betting \$1,000 against \$8.38, that A. B. would live one year. That would be gambling on an event which might or might not occur, and the gambler's judgment would be governed by A. B.'s physical condition at the time, and his opinion of the chances that A. B. would survive the period. The risk of losing \$1,000, or gaining \$8.38, would therefore be centered in the *event* of one man's surviving the term;—

which event, in itself considered, is not the subject of law, but of an infinite number of unknown and extraneous circumstances.

The insurance office, on the other hand, collects \$8.38 from each of one hundred thousand men, on the certain knowledge that \$838,000 will provide for the aggregate mortality of the whole number, and pay for the man who dies within the year, \$1,000.

The distinction between these two illustrations is demonstration, that the first is centered in the *event*, while the second is centered in the *law* established by the mean of large numbers, eliminating completely the gambling hazard, which depends on the *event* alone.

There is nothing, then, so certain as the mean duration of 100,000 lives, and nothing so uncertain as the duration of a single life; and these indisputable facts are further demonstration, that the business of life insurance is not in any sense of the word the subject of chance, nor is it exposed to the irregularities of an event so uncertain, and yet so certain, as death itself.

STATE CRAFT.

The cost of life insurance is not by any means limited to the sole factor of the mean mortality of a state or nation. There are other serious elements of expense, which enhance the cost, and have to be provided for in the premium charge. One of the first is,

ILL-ADVISED AND OBSTRUCTIVE LEGISLATION.

The assembling of a State legislature is generally regarded as the signal for a campaign of the companies against obstructive and hostile legislation, to prevent which is frequently a costly matter. An enumeration of the various acts which have been introduced for the regulation of the life insurance business within the past few years would fill volumes.

An attempted fraud of no mean proportions having

been prevented by the conclusive testimony of the physician who had charge of the case, the discomfited attorney who brought the suit at the next session of the legislature introduced a bill prohibiting any physician from testifying in a case which he had treated, and which might become the subject of judicial inquiry. The bill passed; and if that attorney ever gets a similar case, he will not be defeated by the only witness competent to prove the facts. Other States have since enacted the same law.

The two leading political journals, located in the capital of a great State, secured the passage of a bill, which forced all of the companies doing business in that State to advertise their statements twice a year in the two papers having the largest circulation, such advertisements to be ordered and paid for by the Comptroller at the expense of the companies. Three or four squares of ordinary advertising matter were padded so as to measure twenty-six squares, and made an enormous bill, which had to be paid, on pain of expulsion from the State. Indignant protests took out considerable padding, but the two papers have reaped a very rich annual harvest ever since,—which has been of no other benefit to anybody, and was not intended to be. Nevertheless, the organs of the dominant political parties were able to exact this tribute from the insurance companies, for the reason that there were no local companies to oppose it.

The licenses, fees, and taxes imposed by some of the States are well-nigh prohibitory, and these must necessarily be met by an increase of premium or reduction of dividend.

Extravagant commissions, bonuses, and other expensive means of promoting business by ambitious companies, have cut down the dividends, and by so doing increased the cost.

The true remedy for these costly expenditures is not apparent.

ACCIDENT INSURANCE.

Insurance against accidental loss of life only, eliminating all other causes of mortality, was introduced to this country in 1863 by *The Travelers Insurance Company of Hartford, Conn.* The business was popular from the start, and has grown steadily in public favor, until it is recognized as a necessity, quite as much as life or fire insurance.

The same regularity appears in the occurrence of death by violent and accidental means, when applied to large numbers, as from consumption, or any other specific cause of human mortality. The mortality by consumption, if applied to insured lives, is about 23 per cent. of the total. We will not be far wrong, then, if we say that nearly one-quarter of all the premiums paid for life insurance policies are due to consumption or phthisis.

The mortality caused by violent and accidental means, excluding suicide, is about 8 per cent. of the whole number. The benefit of selection, under the most skillful examination, wears off in a very few years as a precaution against loss by consumption; so that the mortality from that cause is constant, and cannot be materially diminished by selection.

Violence and accident are supposed to be governed by a very different law; but when our observations are applied to sufficiently large numbers, the regularity is surprising, and we find that the law must be sought, not in the extraneous immediate circumstance of a vicious horse, an old harness, or a defective wheel, but in the mean of that inherent, constitutional infirmity of mankind in general, which "trusts luck" and "takes chances," rather than provide against them promptly. One man, who has the reputation for good sense in other respects, will ride himself and trust his family in an old carriage which ought to have gone to the scrap heap years ago. His notions of economy are false; and the disposition

to "wear things out," rather than replenish, is seen in every act of his life. The accident, which is sure to come, should be chargeable to the weakness of the man, rather than the defective vehicle, which is only incidental. The family taint, then, which is everywhere recognized as a warning against phthisis, is not sufficiently well-considered as a warning against accidents.

I have been asked to read a paper on life and accident insurance combined: it should rather have been life and accident insurance separated; for life insurance proper covers all the elements of mortality, while accident insurance, so far as the life is concerned, is limited to one of the elements, the value of which is about 8 per cent. of the whole.

The prejudice, which was raised twenty-five years ago, against the combination of life and accident insurance by any one company, has nearly disappeared. It was thought that the accident business, about which very little was known in this country, must necessarily be a menace to the life business, and should therefore be classed with steam-boiler, plate-glass, and other kinds of casualty insurance because it is not analogous with life insurance. That accident insurance is, however, nothing more nor less than limited life insurance, is beginning to be better understood by the public.

The compensation for non-fatal injuries is the only element which cannot be determined approximately by the experience of life insurance companies, for the fatal and non-fatal injuries have no close relation to each other.

To our regular life policies we frequently attach an accident death only policy, for an additional charge to the life rates of \$2.00 per thousand: thus, if the policy is for \$2,000, an additional payment of \$4.00 will insure the additional payment of \$2,000, in the event of accidental death. This may be called a combination of life

and accident insurance, as it secures, for a trifling addition to the premium, the advantages of both, and the risks are analogous.

SUICIDE.

That suicide is getting to be one of the fine arts, every life insurance officer knows. That men will deliberately contrive the means of their own destruction, in order to get the best of a life insurance company, and leave money to those who come after them, is passing strange: but the fact of consummate skill, with great deliberation, and without even the trace of insane impulse, is shown in too many cases to admit of a doubt. The old theory, that the fact of suicide is in itself evidence of insanity, has long since been exploded. In 1877 the ratio of suicide to the general population was nine-tenths of one per cent., but the ratio to insured lives was 1.28 per cent. Since that time nearly all of the companies have ceased to plead the fact of suicide as a defense to the payment of their policies, and the ratio of suicides to insured lives has increased with frightful rapidity.

Some companies, as an evidence of their great liberality, boldly proclaim to the world that their policies contain no restriction against suicide, and thus offer a large bonus for self-murder. They plead justification, however, from the fact that it is useless to contend with courts and juries over a suicide case, and that they may as well pay, and save the time and cost of litigation. There is much truth in this plea, but the result to society is seen in the enormous increase of the crime.

Frederick L. Hoffman, in the May number of the *Arena*, has treated this subject with great intelligence, but without any reference to the question of insurance. He shows, by painstaking investigation, that between the years 1870 and 1890, in the State of Massachusetts, the number of suicides increased 203 per cent.; in Con-

necticut, 316 per cent.; in Michigan, from 1875 to 1890, fifteen years, an increase of 223 per cent.

That this fearful increase is not due to the changes in population is shown from the corresponding analysis, that in Massachusetts, the increase in population was 50.6 per cent.; suicide, 130 per cent. Connecticut, 59 per cent.; suicide, 216 per cent. Michigan, 63.9 per cent.; suicide, 123.8 per cent.

That these percentages and ratios, if applied to insured lives instead of general population, would be very much larger, is well known, and is good evidence that life insurance offers the strongest temptation to suicide.

That this unnatural crime is contagious, both as to the act and to the method, has been made conspicuous in many localities. In Berkshire County, Mass., Hoffman shows us, that for the five years, 1865 to 1870, there were seven suicides; during the five years, 1885 to 1890, there were forty in the same locality. Self-murder is more popular in San Francisco, Cal., than in Providence, R. I. In 1890, San Francisco recorded one suicide to 3,800 inhabitants, while in Providence there was only one to 22,024 inhabitants. No one will believe that the volume of insanity is six times greater in San Francisco than in Providence, and if not, then the larger ratio of suicide must be attributed to some other cause.

Dr. Matthews says, that "the most powerful influence leading to suicide is civilization,"—by which we must infer, that the degree of civilization is six points higher in San Francisco than in Providence or Boston.

The same difference appears in many other States and countries, but it does not follow, that where the degree of insanity runs highest, there will necessarily be most suicides.

I have been satisfied for many years, that the increasing rate of mortality from this cause is due to the fact that there is no longer any provision against it in

life insurance contracts, as there was formerly, and should be now ; unless it is for the public good that the crime of self-murder should be encouraged and promoted, by large rewards in money, the equivalent of which is indirectly an assessment on the surviving policy-holders in life insurance companies.

Dr. Morselli, a well-known authority on this subject, says, "that just as madness may go on without any attempt at suicide, so the suicidal purpose may be formed in the healthiest mind, and carried out with the coolness inspired by perfect logic."

Dr. Matthews, another authority, says, "that self-killing is emphatically the crime of intellectual peoples, and no act of a man's life can be more coolly and rationally planned than is generally the act of leaving it."

The statistics of the actual mortality by suicide are at least thirty-three per cent. under the truth, owing to the fact that surviving friends will insist that the record shall show an accidental rather than an intentional act. It is quite natural that the sympathy of a coroner's jury will pay this respect to the feelings of surviving friends and neighbors, whenever a circumstance can be found to justify it, or even suggest it.

ACCIDENTS OF OCCUPATION.

This subdivision of the risk is too complicated for treatment in this paper, but if the actual mortality in some occupations was known and understood by those exposed, it would be difficult for the employer to secure a sufficient force.

EMPLOYERS' LIABILITY.

Insuring the employer or property owner against his legal liability for injuries to persons, the result of negligence in not providing sufficient protection to the public and his own employes, does not yet afford the observations of an extended experience in this country. We

have enough, however, to teach us that the risk is not to be trifled with. The number of lawyers willing to give expert advice, as to the present and future value of a broken leg, is amazing. Suits for twenty and twenty-five thousand dollars are not uncommon, where the claim is settled for twenty-five or fifty dollars.

The cost of retaining counsel, to put in appearance and make answer to experiments of this character, is frequently more than is required to adjust the claim. The legal expenses in this class of insurance is a very important element in the risk, though entirely extraneous thereto. The rates of premium are as yet experimental, and too low, but the companies which survive the raids of speculators and malingerers will find in due time a safe and consistent method for carrying the risk, so that it will be alike beneficial to the insurers and the insured.

THE TRAVELERS INSURANCE COMPANY

of Hartford, Conn., is the only company in this country which combines the full life and accident risk under a single policy, and for the trifling addition of \$2.00 per thousand to the life rate pays double the amount insured in the event of accidental death. Indemnity for non-fatal injuries is not insured under this policy, for the reason that the actuarial work of tabulation and valuation is more conveniently performed under separate policies: furthermore, experience has demonstrated that the indemnity for non-fatal injuries does not bear that close relation to the fatal injury which has been claimed by some, but is, on the other hand, to a great extent governed by that regularity which pertains to specific occupations, and not by any law of general average applicable to all occupations.

As the rates of mortality are found to vary in different States and countries, and are not the same for different occupations, professions, and social positions, so

also we find similar features at different points of observation affecting the accidents of life, which cannot be explained by differences in latitude and longitude, nor by tables.

The mortality by accidental violence cannot, like the tabular death rate, be treated as a function of age; therefore, age 30 and age 60 are rated alike; age 30 has the greater recuperative power from a serious injury, but the exposure is greater than at 60.

The observations of Mr. Richard Teece, the distinguished actuary and manager of the Mutual Provident Life Insurance Company of Australia, reveal a mortality by violence and accident far in excess of the combined experience in the United States, while the mortality by suicide is so far below that there were only 14 suicides to 5,500 deaths, or a fraction less than one-quarter of one per cent., over a period of 44 years. The suicide experience on insured lives in this country, when compared with that of Australia, is simply appalling, and will not be admitted as proof of Dr. Matthews' theory, that it is evidence of a higher degree of civilization.

The experience of The Travelers Insurance Company with non-fatal injuries, when analyzed by occupations, will demonstrate that the fluctuations between one occupation and another, great as they may be, are to be sought for in the personal equation of the operatives themselves as the cause, rather than any assumed line of regularity, which may be determined from the casualties which follow the use of any special class of tools or machinery. It frequently happens that the most experienced operatives, owing to a familiarity with and contempt of danger, meet with injuries which rarely happen to an apprentice or green hand doing the same work, who make no vain exhibitions of their ability at points of greatest danger. The experienced foreman, who lost a second finger at the buzz-saw while showing the pro-

prietor how he lost the first, made a most convincing demonstration of his fact, but we must not charge the saw with his second finger.

The absent-minded switchman, or the most intelligent and skillful engineer, who, in an instant of abstraction, mistakes his signal, and wrecks his train, are both accidents of occupation; but the real cause eludes the vigilance of the most careful observer.

I find that the record of our experience is more reliable as to the *means* by which both fatal and non-fatal injuries are inflicted, than it is as to the *cause*. The cause is so frequently extraneous to the means, and so difficult to determine, that it is of little statistical value. The responsibility which attaches to the actual cause of every important casualty invokes at once all available means for its concealment. We cannot measure, nor avoid, nor remove a cause, the character of which is unknown, or even doubtful.

The destruction of Fargo is attributed to fire as the cause, but this is certainly erroneous; fire was the means, undoubtedly, but the cause may be traced back to the early training (or the want of it) of the thoughtless person, who shoveled out hot coals and ashes into a pile of shavings and combustible rubbish, without considering the effect of such a combination as live coals, pine shavings, and a high wind. The constitutional infirmity, which makes such things possible, is in the blood for generations, and is the cause of many evils which are inherited. If this be true, then the education which will give us substantial results, must commence about one hundred years before the child is born.

That degree of prudence and foresight which leads men to protect themselves and their families by policies of life and accident insurance, is good evidence that not very far back in their family history we shall find a progenitor of like character for prudence and economy.

That beggars beget beggars, that criminals beget criminals, that drunkards beget drunkards, will not be disputed by any intelligent investigator. The taint of blood may lie dormant for one or two generations, until a favoring circumstance once more kindles the flame, which is not easily extinguished.

We contend that life and accident insurance is one of the most powerful of all educational forces for the culture of true manhood which has ever been grafted upon our social economics.

The improvident man, who flatters himself by repeating the worn-out axiom, that "the world owes him a living, and he means to collect the debt," will probably find a full statement of his account in the almshouse or penitentiary.

The opportunity to earn his own living is the only claim which the world ever has or ever will recognize from the children of men. Society is cheerfully helpful to all those who are willing to help themselves.

A life insurance policy is evidence of good citizenship; it inspires confidence, credit, and self-respect. If combined with accident insurance, so much the better: for the possible accumulations of a lifetime of honest industry are thus immediately protected against the ever-present hazards of sudden and untimely death; and if by accident, then in double amount.

If we could obtain the personal equation of all communities, determined by a high standard of prudence, we would know much better than we do now the true value of our risks, and what to take, what to reject, and what communities to avoid.

Some men are proverbially careful of their own interests, and thoughtful of others; others notoriously careless as to their own, and utterly indifferent as to the welfare and comfort of their neighbors. One is governed by a sense of duty and forethought, the other by

an impulse of present necessity. They stumble through life, eat, drink, and die, leaving no other legacy than their own infirmities to half a dozen or more children, who in turn transmit the same infirmities to another generation. Here we find those who shovel hot ashes into the woodpile, and lay upon society at large a burden of risk, against which all the insurance the prudent man can get is not enough; and the imprudent do not insure at all, which lays an additional burden on those who do.

VOLUME OF BUSINESS.

The whole number of full life and endowment policies in force on the 1st of January, 1893, was 1,532,812, the amount insured being \$4,707,918,487.

Industrial policies were held by 5,007,194 persons, insuring \$564,389,135 in amount.

This shows that about nine-tenths of the entire population have no insurance at all, making proper deduction for the number of policies issued by American companies, but held in foreign countries.

The amount of accident insurance in force on January 1, 1893, was \$1,418,412,518.

That social environment has a powerful influence on the actions of men admits no discussion; but as every man's conduct is subject to the law of his antecedent history, we may expect that a change in environment will be followed by a change in action, but the antecedent influence will speedily manifest itself. It is of the highest importance, then, that every community should cultivate and encourage in every citizen all the phenomena, mental and physical, which induce to good husbandry and personal independence. To neglect this is to neglect a public duty. That a widespread, open-handed charity does not answer the requirements, but on the contrary multiplies the demand,

is well known. Very few beggars are oppressed with the wholesome fear that they may be buried at the public expense.

The man with an insurance policy will not be the beggar; and the beggar will never be the man with an insurance policy.

The first desideratum to good citizenship is the ownership of a comfortable home, where the man's family may be rooted to the soil, and thus have a property interest in the community where he lives.

Assuming that such a home may be secured for \$1,000, any good mechanic, at age 30, may become its immediate possessor on sufficiently easy terms of purchase.

Annual interest, 6 per cent.,	\$60.00
Taxes, Insurance, and Repairs,	30.00
Life and Accident Insurance in the sum of \$2,000,	20.00
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Annual expenditure as <i>rent</i> ,	\$110.00
Pay \$5.00 per month on purchase,	60.00
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Total cost first year,	\$170.00

A good mechanic, who can earn \$900 per annum, and live on \$730, can afford to marry, and in a few years own his home free from debt. If he should die by disease during the first or any subsequent year, his life insurance will pay his debt; but if by accident, his wife will own her home and have \$1,000 in cash.

This is the true way to make good citizens of poor men, and such citizens will not throw hot ashes into the woodpile, nor be apt to waste their earnings in the rum shops.

Bankers, merchants, and men of affairs, who take policies for large amounts, are not the objects of our concern. The great danger to society lies with the struggling masses, who have no homes, and do not know how to secure them. Men who own their homes will not be found in the society of anarchists, who

would destroy what others build. Make it easy, then, for all who will to enjoy the shelter of their roof-tree, and you will provide defenders for your own.

The insurance policy makes it safe to buy a home, and also safe to sell one. The buyer will not, in the event of death, make forfeit from inability to pay; and the seller will, in the same event, be sure of his money. It enables the poor to secure immediately what would otherwise be postponed for many years, and the lessons of thrift, independence, and good citizenship are learned in a day. The habit of saving supplants the habit of spending, and contentment takes the place of unrest and misery.

Who then will measure the inestimable benefits, from purely social and educational points of view, which have been derived from the insurance companies alone, during the past forty or fifty years, and may be multiplied again and again in the years to come?

Who will deny that, when, instead of one-tenth, nine-tenths of the inhabitants of the United States have the protection of life insurance, the quality of citizenship will be vastly improved thereby.

When every citizen is the possessor of even a little capital, or is provided with the means of obtaining it, there will be a smaller number seeking for the means of destroying it.



